

Title (en)  
Surgical instrument incorporating an articulation locking mechanism

Title (de)  
Mit Gelenksperrmechanismus versehenes, chirurgisches Instrument

Title (fr)  
Instrument chirurgical avec un dispositif de blocage d'une articulation

Publication  
**EP 1621146 A3 20080723 (EN)**

Application  
**EP 05254703 A 20050727**

Priority  
• US 59169404 P 20040728  
• US 9205305 A 20050329

Abstract (en)  
[origin: EP1621146A2] A surgical instrument particularly suited to endoscopic use articulates an end effector by including an articulation mechanism in an elongate shaft that incorporates an electrically actuated polymer (EAP) articulation locking mechanism actuator. Thereby, additional options for articulation become feasible, especially those that are actively powered and would otherwise dissipate heat and power if required to maintain position. Alternatively, a mechanically actuated articulation mechanism may be designed with reduced strength, and thus size, since the EAP articulation lock mechanism assists in preventing back driving after articulation. Versions of a. EAP articulation locking mechanism lock a pivoting articulation joint and others lock a flexible neck articulation joint.

IPC 8 full level  
**A61B 17/072** (2006.01); **A61B 17/28** (2006.01)

CPC (source: EP KR US)  
**A61B 17/00** (2013.01 - KR); **A61B 17/04** (2013.01 - KR); **A61B 17/07207** (2013.01 - EP US); **A61B 17/122** (2013.01 - KR);  
**A61B 17/00234** (2013.01 - EP US); **A61B 17/29** (2013.01 - EP US); **A61B 2017/00398** (2013.01 - EP US); **A61B 2017/00871** (2013.01 - EP US);  
**A61B 2017/2904** (2013.01 - EP US); **A61B 2017/2927** (2013.01 - EP US)

Citation (search report)  
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• [YD] US 5673841 A 19971007 - SCHULZE DALE R [US], et al  
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EP2292154A1; US2012160892A1; AU2007219293B2; AU2007219316B2; AU2007219314B2; US8561874B2; EP3926180A1; EP1908412A2;  
US9820737B2; US10702265B2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA HR MK YU

DOCDB simple family (publication)  
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AU 2005203216 B2 20120308; CA 2514212 A1 20060128; CA 2514212 C 20141223; JP 2006051347 A 20060223; JP 5073184 B2 20121114;  
KR 20060092839 A 20060823; MX PA05008042 A 20060210; RU 2005123950 A 20070210; US 2006025810 A1 20060202;  
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